

Exhibit 14

Our Reference: G-122-80

Office of the Assistant Secretary
for Health
Washington DC 20201

Office of the
General Counsel
Columbia University

FEB 24 1981

MAR 13 1981

RECEIVED

Mr. Paul A. Marks
Vice President for Health Sciences
The Trustees of Columbia University
New York, NY 10027

Dear Mr. Marks:

Reference is made to an invention entitled "Processes for Inserting DNA Into Eucaryotic Cells and for Producing Proteinaceous Materials," which was developed by Richard Axel, Michael H. Wigler, and Saul J. Silverstein with support from National Institutes of Health research grants Nos. CA-23767 and CA-16346. Reference is also made to the petition of April 4, 1980 requesting that Columbia University (sometimes hereinafter referred to as the "University") be permitted to retain and administer the principal rights in this invention. We understand that Patent Application Serial No. 124,513 was filed February 25, 1980 on this invention.

In considering the request for a determination under Section 8.2(b) of the Department of Health and Human Services (HHS) regulations, the case has been evaluated to determine whether it is consistent with 41 C.F.R. 1-9.109-6 of the Federal Procurement Regulations, with Section 8.1(a) of the HHS regulations (45 C.F.R., Parts 6 and 8), more specifically with Section 8.2(b), and with the intent of the Presidents' Statements and Memoranda on Government Patent Policy (36 FR 16887, August 26, 1971, and 28 FR 10943, October 12, 1963). Consideration has also been given to whether the invention will be more adequately and quickly developed for widest use if it is assigned to Columbia University for development and administration.

Your petition for title to the invention has been granted, but your request for authority to grant an exclusive license without further review is hereby denied. In addition, your request that the nonexclusive, irrevocable, royalty-free license for the government apply only to the United States Government, except in those cases where state and local governments are acting as contractors to the United States Government, or require the invention to fulfill some Federally imposed requirement, is denied. Also, your request that whether or not an applicant for a nonexclusive license

Page 2 - Mr. Paul A. Marks

after a period of exclusivity to another licensee expires is "qualified" be determined by joint agreement of Columbia and the Department of Health and Human Services, is denied. Columbia University may make this determination without consultation with this Department.

It will be necessary for Columbia University to submit any potential exclusive license to us for review and approval, with a justification showing the need for exclusive licensing, and the steps taken by the University to attempt to license on a nonexclusive basis.

Consistent with the regulations cited supra, it is my determination that:

1. The public interest will be best served by the expeditious development of the invention described in the United States patent application Serial No. 124,513 (hereinafter sometimes referred to as "the patent application").

Review indicates that development is necessary to advance the invention to the point of practical application and meet Food and Drug Administration approval. Such development shall include establishing and equipping an appropriate laboratory; identifying and cloning eucaryotic cells; preparing biologically significant materials using the process of the invention; and preparing, isolating, and characterizing biologically significant materials produced using the process of the invention. Clinical studies will have to be done on animals and humans to test the purity of material produced by the process. The process will have to be scaled up for producing material to commercially useful quantities. Data will have to be compiled; personnel educated; seminars conducted; publicity arranged for; packaging developed; and production initiated.

2. To encourage the above development, all right, title and interest in the invention is hereby left to the University for development and administration, subject to the following terms and conditions:

- (a) The inventors, Richard Axel, Michael H. Wigler, and Saul J. Silverstein shall assign all of their rights in the invention, including their rights in the patent application, to the University. The assignment under the patent application shall be recorded by the University in the United States Patent and Trademark Office, and copies thereof shall be furnished to this office.

- (b) The University shall not assign its U.S. patent rights in the invention to parties other than the United States Government, except that it may assign such rights in the invention to a patent management organization provided that the patent administration agreement between such organization and the University is approved by the HHS. Any reference in this determination to

Page 3 - Mr. Paul A. Marks

the University shall also include such patent management organization when applicable and any assignment to such an organization shall be subject to all the terms and conditions of this determination.

(c). The determination of whether or not patent application shall be filed in foreign countries is left to the discretion of the University. Foreign patent rights may be licensed or assigned by the University to any party of its choice. However, any exclusive license or assignment of foreign patent rights to such party shall include a provision for royalty payments to the University based on foreign sales related to such license or assignment, and, provided that such party has a license or right to market in the United States, a provision for nonexclusive licensing in the country covered by the licensed or assigned rights on the basis of not having made the invention available in the United States within a reasonable time after marketing abroad.

In the event that such party has a license or right to market in the United States, such party shall agree to grant nonexclusive licenses or sublicenses for marketing rights in the invention outside the United States, as directed by the United States Government.

(1) if that party is marketing a product embodying the invention outside the United States for at least 2 years and

(a) such product is not then being marketed in the United States, or

(b) if required, Food and Drug Administration approval for marketing in the United States is not being actively pursued, or

(2) if that party is marketing a product embodying the invention outside the United States for at least 2 years from the date the product has Food and Drug Administration approval for marketing in the United States, and such product is not then being marketed in the United States.

(d) The University shall grant to the Government of the United States (including any agency thereof, State, or domestic municipal government) a nonexclusive, irrevocable, royalty-free license for governmental purposes, and on behalf of any foreign government pursuant to any existing or future treaty or agreement with the

Page 4 - Mr. Paul A. Marks

United States under each United States or foreign patent application filed. The form of license to be granted under each patent application is enclosed.

(e) The University shall provide written annual reports to the HHS commencing 1 year from the date of this Agreement regarding the development and commercial use that is being made and is intended to be made of the invention, including the amounts and source of money expended in such development and such other data and information as the HHS may specify. After the first commercial sale of any product embodying the invention, such report shall specify the date of the first commercial sale and shall include information relating to gross sales by licensees, and gross royalties received by the University.

(f) In regard to the U.S. patent application, the University agrees that if it or its licensee has not taken effective steps within 3 years after a patent issues on the invention to bring the invention to the point of practical application, or has not made the invention available for licensing royalty-free or on terms that are reasonable in the circumstances, or cannot show cause why it should retain all right, title, and interest for a further period of time, the HHS shall have the right to require (1) assignment of the invention and the U.S. patent to the United States; (2) cancellation of any outstanding exclusive licenses; and/or (3) the granting of licenses to an applicant on a non-exclusive, royalty-free basis or on terms that are reasonable in the circumstances.

(g) In regard to the United States patent application, the HHS reserves the right to license or to require the granting of a nonexclusive or exclusive license to a responsible applicant or applicants to practice the invention on terms that are reasonable in the circumstances, if the University and/or any of its licensees fail to comply with any of the provisions of this determination, or if the HHS determines that the public health, safety, or welfare requires the issuance of such licenses, or that the public interest would otherwise suffer unless such licenses were granted.

The University and its licensee shall be given written notice of any proposed determination pursuant to the provisions of this paragraph not less than thirty (30) days prior to the effective date of such determination and, if requested, shall be granted a hearing before the determination is put into effect.

(h) The University shall use all reasonable effort to bring the invention to the commercial market through licensing on a non-exclusive, royalty-free or reasonable royalty basis. However,

Page 5 - Mr. Paul A. Marks

exclusive licenses may be granted after reasonable efforts have been made to license on a nonexclusive basis, or where the University has determined that an exclusive license is necessary as an incentive for development of the invention, or where market conditions are such as to require exclusive licensing.

(i) Any exclusive license granted by the University under the U.S. patent application to a qualified manufacturer for research, development, and marketing shall be for a limited period of time, and in no event shall the period be longer than five (5) years from the date of the first commercial sale in the United States of products embodying said invention, or ten (10) years from the date of the exclusive license, whichever occurs first, provided that the licensee shall use all reasonable effort to effect introduction into the commercial market as soon as practicable, consistent with sound and reasonable business practices and judgment.

Any extension of the maximum five (5)-year period of exclusivity shall be subject to the approval of the HHS. Any request for such an extension shall be considered on its merits upon written request and justification, it being understood that, upon expiration of the period of exclusivity or any extension thereof, any license thereafter shall be granted to all competent and properly qualified applicants either royalty-free or at a uniform rate to all licensees, and not in excess of the royalty rate of the previously granted exclusive license.

Unless otherwise provided in this determination, nothing herein shall be construed as a requirement that the University obtain the agreement from any of its licensees to license its improvement inventions or technical data to subsequent licensees.

(j) Any license granted by the University under the U.S. patent application shall include adequate safeguards against unreasonable royalties and repressive practices. Royalties shall not in any event be in excess of normal trade practice. Such license shall also provide that all sales to the U.S. Government shall be royalty-free.

Should the subject matter of the invention be of sufficient interest to the National Cancer Institute of the National Institutes of Health that it decides to pursue the material further and to sponsor clinical studies, such license shall also contain a provision that the licensee supply to the National Cancer Institute any material needed for such preclinical and clinical studies at no cost to the Government, subject to negotiation in special circumstances.

Page 6 - Mr. Paul A. Marks

(k) If permitted by its patent policies, and the terms of the grant or award under which the invention was made, the University may share royalties received with the inventors provided that the University shall not pay the inventors more than (1) fifty percent (50%) of the first \$3,000 gross royalty paid under any license granted under (h) or (i) above; (2) twenty-five percent (25%) of the gross royalty income between \$3,000 and \$13,000; and (3) fifteen percent (15%) of the gross royalty in excess of \$13,000. The balance of the royalty income, after payment of expenses incident to the administration of the invention, shall be utilized for the support of educational and research pursuits.

(l) All licenses issued by the University shall be subject to the conditions of this determination, and shall specifically incorporate by reference all applicable provisions contained herein. The University shall promptly furnish copies of any license agreements entered into by it to the HHS.

(m) The University shall upon request grant a power of attorney authorizing the HHS to inspect and make copies of any documents in the United States Patent and Trademark Office pertaining to the prosecution of the U.S. patent application.

(n) The University shall not abandon the patent application without first offering to transfer all rights in and to such application to the United States Government as represented by the Secretary, HHS not less than forty-five (45) days prior to the date a reply to a Patent and Trademark Office action is due. If the Government does not request assignment within thirty (30) days of receipt of this offer, the University may permit the application to go abandoned.

(o) Any United States patent application filed by the grantee institution shall include the following statement in the first paragraph of the specification following the abstract:

"The invention described herein was made in the course of work under a grant or award from the Department of Health and Human Services."
If the application does not now contain this statement, please request the Patent and Trademark Office to amend the application, and furnish this office with a copy of your request.

If the foregoing determination is acceptable to Columbia University, we request that such acceptance be indicated in the space provided below, and that a signed copy be returned to the Patent Branch, Office of the General Counsel, c/o National Institutes of Health, Room 5A03, Westwood Building, Bethesda, Maryland 20205. This determination will become

Page 7 - Mr. Paul A. Marks

effective upon receipt of the signed copy. Executed copies of the appropriate assignments and licenses required by this determination should be submitted to the Patent Branch as soon as possible.

Sincerely yours,

/s/ Charles Miller

Assistant Secretary for Health

Accepted: COLUMBIA UNIVERSITY

By: Robert I. Levy

Type Name: Dr. Robert I. Levy

Title: Vice President for Health Sciences

Date: October 5, 1983

Enclosure

cc: Dr. Axel
Dr. Wigler
Dr. Silverstein